

Appl. No. 10/689,342
Atty. Docket No. CM2536CQ
Amdt. dated November 20, 2007
Reply to Office Action of June 26, 2007
Customer No. 27752

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AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1. (Currently Amended) A self-bonded corrugated web comprising a primary pre-bonded web layer of thermoplastic fibers having a substantially uniform thickness in a z direction and having a CD orientation and a MD orientation, the primary pre-bonded web arranged to form corrugations oriented in a corrugation pattern of parallel corrugation lines wherein said corrugations lines are essentially parallel to the MD orientation of said web layer, the corrugated web includes a primary bonding pattern of heat- or melt-fusion bonded regions forming a plurality of first primary bonding pattern continuous lines and second primary bonding pattern continuous lines, the first primary bonding pattern continuous lines are parallel to each other and the second primary bonding pattern continuous lines are parallel to each other, the first primary bonding pattern continuous lines are non-parallel to the second primary bonding pattern continuous lines, the first primary bonding pattern continuous lines and the second primary bonding pattern continuous lines are arranged non-parallel to the corrugation lines, the first and second primary bonding pattern continuous lines intersect at least two of the corrugation lines for stabilizing the corrugations of the corrugated web and wherein the continuous lines of said first primary bonding pattern intersect the continuous lines of said second primary bonding pattern, wherein said first and second primary bonding pattern continuous lines form regions of corrugations that are not bonded by said primary bonding pattern.

Claim 2. (Original) A self bonded corrugated web according to claim 1, wherein each of the corrugation lines of the corrugation pattern is connected to at least one neighboring corrugation line by at least one primary bonding pattern line.

Claim 3. (Canceled)

Claim 4. (Previously Presented) A self bonded corrugated web according to claim 1, wherein the first and second primary bonding pattern continuous lines are intersecting lines circumscribing regions unbonded by the primary bonding pattern.

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Claim 5. (Previously Presented) A self bonded corrugated web according to claim 4, wherein the regions unbonded by the primary pattern contain at least 3 corrugations.

Claim 6. (Previously Presented) A corrugated web according to claim 4, wherein regions unbonded by the primary pattern contain less than 20 corrugations.

Claim 7. (Previously Presented) A self bonded corrugated web according to claim 1, wherein the primary bonding pattern lines are continuous straight lines.

Claim 8. (Cancelled)

Claim 9. (Previously Presented) A self bonded corrugated web according to claim 1, wherein the primary bonding pattern further comprises a secondary bonding pattern comprising a plurality of bonding points.

Claim 10. (Original) A self bonded corrugated web according to claim 1, wherein the web exhibits a low pressure loft of at least $18 [\mu\text{m}/(\text{g}/\text{m}^2)]$.

Claim 11. (Original) A self bonded corrugated web according to claim 1, wherein the corrugated web exhibits a high pressure loft of at least $11 [\mu\text{m}/(\text{g}/\text{m}^2)]$.

Claim 12. (Original) A self bonded corrugated web according to claim 1, wherein the bonding is patterned embossing.

Claim 13. (Cancelled)

Claim 14. (Original) A self bonded corrugated web according to claim 1, wherein the corrugations are deformed in the region of the primary bonding pattern so as to form overlaying layers of the primary web which are bonded to each other.

Claim 15. (Withdrawn) A method of shaping and bonding a primary web for forming a self-bonded corrugated web, the method comprising the steps of:
providing an essentially flat, fiber containing pre-bonded primary web,

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shaping the web into corrugations thereby forming corrugation lines,
autogenously bonding fibers of the corrugated web by means of a primary bonding
pattern of a plurality of primary bonding pattern lines, the plurality of primary
bonding pattern lines being arranged non-parallel to the corrugation lines and
intersecting at least two of the corrugation lines.

Claim 16. (Withdrawn) A method according to claim 15, wherein the corrugations form
vale and crest regions and the bonding of the fibers of the web is essentially only applied
to the vale regions.

Claim 17. (Withdrawn) A method according to claim 15, further comprising the step of
deforming the corrugations in the region of the primary bonding pattern so as to form
overlying layers of the primary web, which are bonded to each other in the subsequent
bonding step.

Claim 18. (Withdrawn) A method according to claim 17, wherein the bonding lines of the
bonding pattern consists of a secondary bonding pattern comprising a plurality of linearly
arranged bonding points.

Claim 19. (Currently Amended) A self-bonded corrugated web having a primary pre-
bonded web layer of thermoplastic fibers having a substantially uniform thickness in a z
direction and having a CD orientation and a MD orientation, the primary pre-bonded web
arranged to form corrugations oriented in a corrugation pattern of parallel corrugation
lines wherein said corrugations lines are essentially parallel to the MD orientation of said
web layer, the corrugated web comprising:

a primary bonding pattern of heat- or melt-fusion bonded regions forming a
plurality of first primary bonding pattern lines and second primary bonding pattern lines,
wherein said first primary bonding pattern lines are parallel to each other and said second
primary bonding pattern lines are parallel to each other, wherein said first primary
bonding pattern lines are non-parallel to said second primary bonding pattern lines,
wherein said first primary bonding pattern lines and said second primary bonding pattern
lines are arranged non-parallel to said corrugation lines, and wherein said first and second
primary bonding pattern lines are solid ~~embossing~~ continuous lines that intersect at least 3
corrugations and wherein the continuous lines of said first primary bonding pattern

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intersect the continuous lines of said second primary bonding pattern, wherein said first and second primary bonding pattern continuous lines form regions of corrugations that are not bonded by said primary bonding pattern, wherein said regions contain at least three corrugation lines.

Claim. 20. (Previously Presented) A self bonded corrugated web according to claim 19, wherein said thermoplastic fibers have a length from about 0.3 to about 7.5 cm.